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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/740,345

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Minoru Mukaida

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EXAMINER

RICKMAN, HOLLY C

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

11/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/740,345

Applicant(s)

MUKAIDA, MINORU

Examiner

Holly Rickman

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 28-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitations requiring a "concave regions having respective predetermined sizes" and a film that is chemically bonded to the contact surface "through dealcoholization or dehydration" in claim 28 introduce new matter. The specification does not appear to provide support for these claimed features. Applicant must either amend the claims or provide specific description of how the original disclosure provides support for these claim features.

Claim Interpretation

3. The limitation "nearly liquid" has been interpreted in light of the disclosure to mean flexible or not completely hardened.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 28-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Craven (U53878147) in view of The Encyclopedia of Polymer Science, Vol. 3, November 1985, pg. 552 and further in view of Rempert (US 6548573).

Craven teaches a composition that is used to increase the friction of surfaces on ice, particularly the surfaces of rubber automobile and truck tires (column 1, lines 5-8). The composition is a mixture of a binder and fine particles that possesses excellent adherence to rubber substrates and provides a high level of friction on icy roads (column 1, lines 21-25). The composition comprises an elastomer and 2-20% by weight of dispersed inorganic particles having a particle size of as small as 0.2 microns. See abstract.

The claims as amended require a rubber tire having "concave regions having respective predetermined sizes. The examiner maintains that this feature is met by Craven which teaches car tires which are known to have surface treads.

In addition, claim 28 now requires that the claimed film includes "modified silicone; wherein the film is chemically bonded to the contact surface through dealcoholization or dehydration." Craven teaches a film that is coated on a rubbered tire that is necessarily chemically bonded thereto at least by hydrogen bonding. The reference does not teach the method of forming the chemical bonding by dealcoholization or dehydration. However, this limitation represents a process limitation in an article claim. That is, the process of bonding is claimed.

It has been held that even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Craven fails to teach the claimed viscosity limitation and the claimed modified silicone. However, Craven does teach the application of the coating via various methods, including brushing, dipping, spraying, etc. (column 2, lines 63-68). Furthermore, The Encyclopedia of Polymer Science, Vol. 3, November 1985, pg. 552 teaches common coating methods and the viscosity range of compounds that are coated utilizing those methods. From this disclosure, the examiner takes the position that the viscosity of the coating is a result effective variable. It would have been obvious to one with ordinary skill in the art to optimize the viscosity of the coating of Craven to meet the requirements of the coating method to be utilized.

Regarding the applicants claimed thickness requirement, the examiner notes that Craven teaches that the thickness of the film is "about 0.5 mils." It is the examiners position that "about .5 mils" encompasses .4 mils, which is equivalent to applicants claimed 10 microns. Thus, Craven meets this limitation. However, should applicant traverse this argument, it is noted that Craven teaches that a film that is 1-2 mils thick will typically remain on the tire for 5-10 miles, depending on road conditions. Thus, the thickness of the film is a result effective variable, with a thinner film remaining on the tire for shorter distances, and vice versa. Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to control

the thickness of the Craven film to suit the distance to be traveled. Shorter distances would require a thinner coating, thereby conserving material.

With regard to the modified silicone limitation, Rempert teaches that it is known in the tire art to add a modified silicone material to a rubber tire surface as a blocking agent to improve frictional engagement between the tire and a wet road surface (see col. 1, lines 37-62; col. 2, lines 36-50).

Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to add a modified silicone to the coating layer taught by Craven in order to improve frictional engagement properties of the resulting tire.

Claim 30 requires the antislipping agent to comprise silicon oxide, aluminum oxide, cerium oxide, silicon carbide, or a fine particulate organic material. Craven teaches that suitable materials for the particulate material include aluminum oxide, silica (synonymous with silicon oxide), silicon carbide, and other inorganic particles (column 2, lines 8-22). Claims 31-33 further limit the viscosity range of the coating. The examiner maintains that it would be obvious to alter the viscosity of the coating to enable a desired coating method to be utilized, as set forth above.

Claims 34-35 further limit the thickness of the film. The examiner maintains that coating thickness is a result effective parameter. Thus, it would have been obvious to one of ordinary skill in the art to determine the optimal coating thickness depending on the desired life of the coating.

Claim 38 requires the particles to have a diameter in the range of 10-100nm. The examiner notes that Craven teaches that the particles have a suitable particle size of "about" 0.2

microns. As "about" 0.2 encompasses 0.1 microns (equivalent to 100nm), the limitations of claim 38 are met.

With regard to the limitation requiring a "flexible film" being "nearly liquid", the examiner takes the position that the polyurethane layer having a thickness within the claimed range taught by Craven inherently satisfies this limitation. Flexible is a relative term which is largely determined by the composition of a particular material and the thickness of that material. Because Craven teaches the use of a polymer layer and a thickness for the polymer layer within the claimed range, one of ordinary skill in the art would expect that it would meet the aforementioned limitations.

It has been held that where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the burden of proof is shifted to applicant to show that prior art products do not necessarily or inherently possess characteristics of claimed products where the rejection is based on inherency under 35 USC § 102 or on prima facie obviousness under 35 USC § 103, jointly or alternatively. In re Best, Bolton, and Shaw, 195 USPQ 430. (CCPA 1977).

The examiner takes the position that the recitation in claim 29 requiring that "at least a portion of antislipping agent is partially exposed throughout a surface of the film, regardless of whether the film has been brought into direct contact with another surface", is essentially defining a process by which the antislip surface is made. In other words, this limitation implies that the film can be made by a process which does not have to include bringing the film into contact with another surface. This process limitation in an article claim has been considered insofar as it limits the structure of the article. The process portion of this limitation does not add

any structural or compositional elements to the claimed article. Thus, it does not patentably distinguish the present claims over the prior art.

Response to Arguments

5. Applicant's arguments filed 9/4/07 have been fully considered but they are moot in view of the new grounds of rejection necessitated by Applicant's amendments.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Watanabe et al. (US 5603367).


7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (571) 272-1514. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Holly Rickman
Primary Examiner
Art Unit 1794

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November 5, 2007